

Source Water Assessment Program (SWAP) Report

For

Country Side Condominiums



Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

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Table 1: Public Water System (PWS) Information

<i>PWS NAME</i>	Country Side Condominiums
<i>PWS Address</i>	151 Providence Street
<i>City/Town</i>	Grafton
<i>PWS ID Number</i>	2110004
<i>Local Contact</i>	Terry Humphries
<i>Phone Number</i>	(508) 839-9048

<i>Well Name</i>	<i>Source ID#</i>	<i>Zone I (in feet)</i>	<i>IWPA (in feet)</i>	<i>Source Susceptibility</i>
Well #1	2110004	204	510	Moderate

What is SWAP?

The Source Water Assessment Program (SWAP), established under the federal Safe Drinking Water Act, requires every state to:

- ? inventory land uses within the recharge areas of all public water supply sources;
- ? assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

INTRODUCTION

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential contaminant sources, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential contaminant sources, the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

1. DESCRIPTION OF THE WATER SYSTEM

The Well

The well for the facility is located on the East Side of Sample Road near the facility. Wellname has a Zone I of 250 feet and an Interim Wellhead Protection Area (IWPA) of 750 feet. The well is located in a sand and gravel aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map of the Zone I and IWPA.

The Water Quality

The water quality of the well currently meets all US Environmental Protection Agency drinking water standards. The well serving the facility has no treatment at this time. The well serving the facility has chlorine added as a disinfectant. For current information on monitoring results and treatment, please contact the Public Water

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.

- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

System contact person listed above in Table 1.

Future Considerations

The facility should consider hooking up to Grafton town water.

2. DISCUSSION OF LAND USES IN THE PROTECTION AREAS

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Inappropriate activities in Zone Is;**
2. **Sewer pipeline;**
3. **Transportation corridor (Rt. 122);**
4. **Crop land; and**
5. **Stormwater drains.**

The overall ranking of susceptibility to contamination for the well is Moderate, based on the presence of only low and or moderate land use or activity in the IWPA, as seen in Table 2.

1. Zone Is – Currently, the well does not meet DEP's restrictions, which only allow water supply related activities in Zone Is. The facility's Zone I contains the condominium building, a dumpster and parking areas. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.

Recommendations:

- ✓ Keep new non-water supply activities out of the Zone I.

2. Sewer line – The condominium complex is on town sewer which is hooked up to the building from Route 122. In fact, both the sewer line and Route 122 are within the IWPA.

3. Crop land – A farm land lies within the Zone I and IWPA of the water supply.

Fertilizer and pesticide applied are potential sources of contamination, if improperly applied or stored.

Recommendations:

- ✓ Do not use fertilizers or pesticides in the Zone I.
- ✓ Use best management practices when applying fertilizer in the IWPA.

Table 2: Table of Activities within the Water Supply Protection Areas

Facility Type	Potential Contaminant Sources	Zone I	IWPA	Threat	Comments
Residential	Transportation corridor	No	Yes	Moderate	Route 122
	Parking lot	Yes	Yes	Moderate	Limit road salt usage and provide drainage away from wells
	Farm land	Yes	Yes	Moderate	Fertilizer and pesticide use
	Sewer line	No	Yes	Moderate	Town of Grafton sewer
	Structure (Condominium building)	Yes	Yes	- - -	Non-water supply structures in Zone I

* -For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

- ✓ Alert the crop land owner of the water supply location.
- ✓ If it's not feasible to purchase privately owned land within the Zone I at this time, consider a conservation restriction that would prohibit potentially threatening activities or a right of first refusal to purchase the property.

4. **Stormwater drains** – Catch basins transport storm water from the roadway and adjacent properties to the ground. As flowing storm water travels, it picks up debris and contaminants from streets, parking areas and lawns. Common potential sources of contamination include lawn chemicals, pet waste, leakage from dumpsters, household hazardous waste, and contaminants from vehicle leaks, maintenance, washing or accidents.

Recommendation:

- ✓ Work with the Town to have the catch basins inspected, maintained, and cleaned on a regular schedule.
- ✓ Additionally, street and parking lot sweeping reduces the amount of potential contaminants in storm runoff. Storm water drains which discharge to Route 122 are located within the Zone I and IWPA.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. PROTECTION RECOMMENDATIONS

Implementing protection measures and best management practices (BMPs) will reduce the well's susceptibility to contamination. Country Side Condominium should review and adopt the following recommendations at the facility:

Zone I:

- ✓ Remove all non-water supply activities from the Zone I to comply with DEP's Zone I requirements. Please note that water systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying their system.
- ✓ Consider well relocation if Zone I threats cannot be mitigated. Please note that DEP Permit Approvals must be obtained prior to the installation of a new well.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.

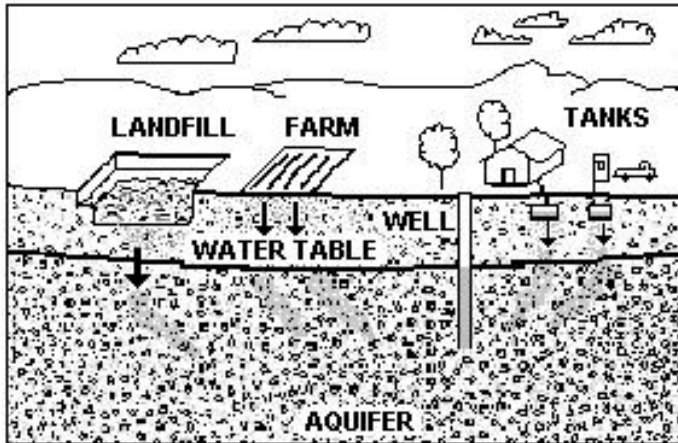


Figure 1: Example of how a well could become contaminated by different land uses and activities.

Training and Education:

- ✓ Work with your community to ensure that stormwater runoff is directed away from the well and is treated according to DEP guidance.

Facilities Management:

- ✓ Implement standard operating procedures regarding proper storage, use and disposal of hazardous materials. To learn more, see the hazardous materials guidance manual at www.state.ma.us/dep/brp/dws/dwspubs.html.

Planning:

- ✓ Work with local officials in Grafton to include the facility IWPA in Aquifer Protection District Bylaws and to assist you in improving protection.
- ✓ Have a plan to address short-term water shortages and long-term water demands. Keep the phone number of a bottled

For More Information:

Contact **Josephine Yemoh-Ndi** in DEP's **Worcester Office** at **(508) 792-7650 x 5030** for more information and for assistance in improving current protection measures.

More information relating to drinking water and source protection is available on DEP's web site at:
www.state.ma.us/dep/brp/dws.

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws, including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been provided to the water department, town boards, the town library and the local media.

water company readily available.

- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a potential contaminant threat inventory to assist in setting priorities, focusing inspections, and creating educational activities.

Agricultural

- ✓ Consider obtaining a conservation restriction for any agricultural land within Zone I that cannot be purchased. Or negotiate a "Memorandum of Understanding" (MOU) with the farmer to refrain from using pesticides and fertilizers and eliminate manure storage within Zone I.
- ✓ Encourage farmers in the IWPA to seek assistance from the Natural Resource Conservation Service (NRCS) in addressing manure management issues.

Funding:

The Department's Wellhead Grant Protection Program provides funds to assist public water suppliers in addressing Wellhead protection through local projects. Protection recommendations discussed in this document may be eligible for funding under the 2001 "Wellhead Protection Grant Program". For additional information, please refer to the attached program fact sheet from last year (Please note: each program year the Department posts a new Request for Response for the Grant program (RFR)).

These recommendations are only part of your ongoing local drinking water source protection. Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

4. ATTACHMENTS

- Map of the Public Water Supply (PWS) Protection Area.
- Recommended Source Protection Measures Factsheet
- Pesticide Use Factsheet

